AUTODOC CLUB

How to change water pump on **BMW 5 Touring (E39)** – replacement guide

SIMILAR VIDEO TUTORIAL



This video shows the replacement procedure of a similar car part on another vehicle

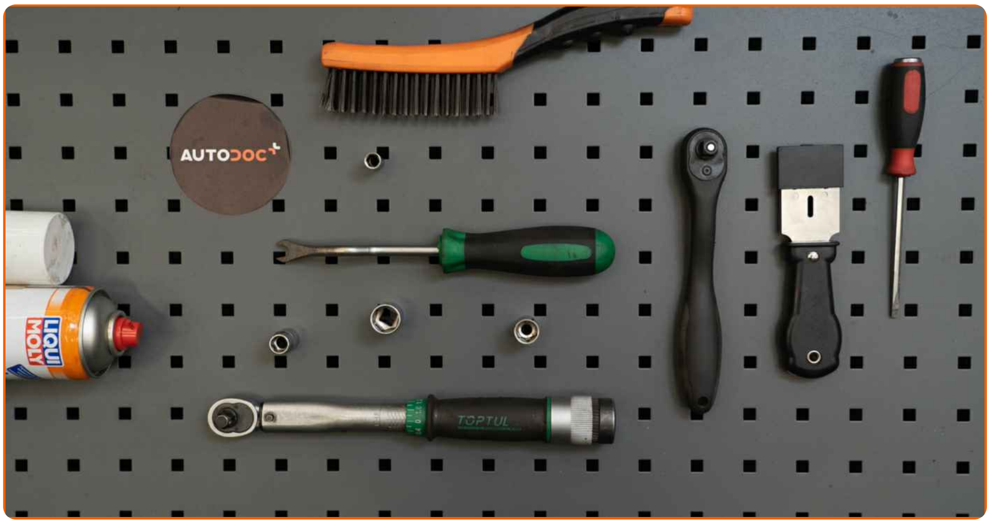
Important!

This replacement procedure can be used for:
BMW 5 Touring (E39) 520i 2.0, BMW 5 Touring (E39) 523i 2.5, BMW 5 Touring (E39) 528i 2.8

The steps may slightly vary depending on the car design.

This tutorial was created based on the replacement procedure for a similar car part on: BMW 3 Saloon (E36) 323i 2.5

REPLACEMENT: WATER PUMP – BMW 5 TOURING (E39). TOOLS YOU MIGHT NEED:



- Wire brush
- All-purpose cleaning spray
- Sealant
- Torque wrench
- Drive socket # 7
- Drive socket # 10
- Drive socket # 13
- Drive socket # 16
- Ratchet wrench
- Clip removal tool
- Seal scraper
- Flat screwdriver
- Funnel
- Fluid container
- Fender cover

Buy tools

Replacement: water pump – BMW 5 Touring (E39). Tip from AUTODOC:

- Follow the terms, recommendations and requirements of the part operation provided by the manufacturer.
- Check the coolant condition and replace it if necessary.
- Inspect the thermostat and the thermostat housing. Replace if necessary.
- Please note: all work on the car – BMW 5 Touring (E39) – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1. Open the hood.
2. Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.
3. Remove the fasteners of the air duct housing. Use a clip removal tool.
4. Remove the air distribution housing assembly.



5

Unscrew the coolant reservoir cap.



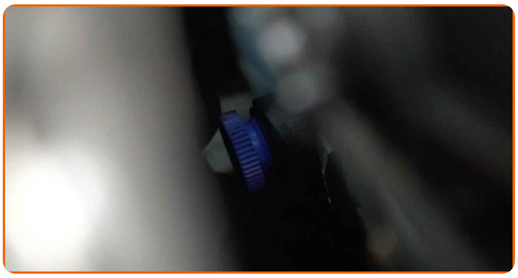
6

Prepare a container for fluids.



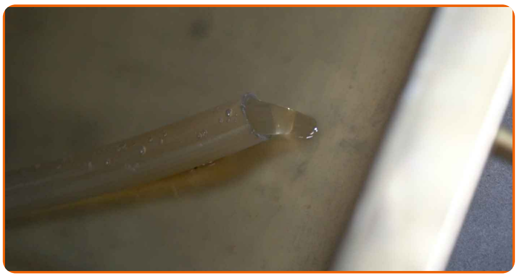
7

Open the coolant drain tap.



8

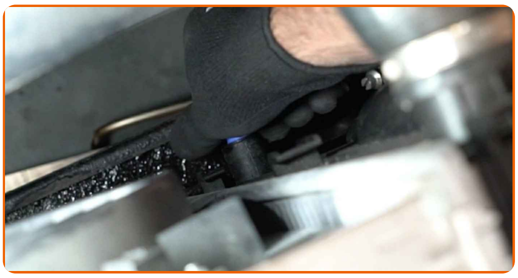
Drain the coolant from the engine.



Replacement: water pump – BMW 5 Touring (E39). Tip from AUTODOC:

- Caution! The coolant can be very hot.
- Wear gloves to prevent contact with hot liquid.
- Please note: all work on the car – BMW 5 Touring (E39) – should be done with the engine switched off.
- Wait until the coolant has completely flowed out of the drain hole.

9 Close the coolant drain tap.



10 Loosen the clamps of the coolant hoses. Use a drive socket #7. Use a ratchet wrench.



11 Detach the coolant hose.



12 Loosen the coolant hose clamp. Use a drive socket #7. Use a ratchet wrench.



13 Detach the coolant hose.



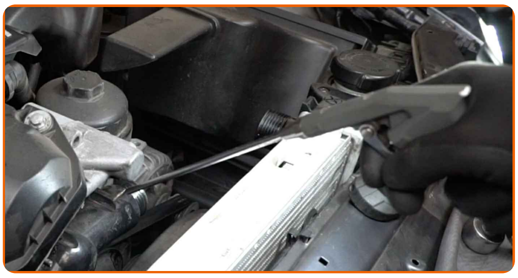
14 Detach the coolant pipe bracket. Use a drive socket #13. Use a ratchet wrench.



15 Unscrew the thermostat housing fasteners. Use a drive socket #10. Use a ratchet wrench.



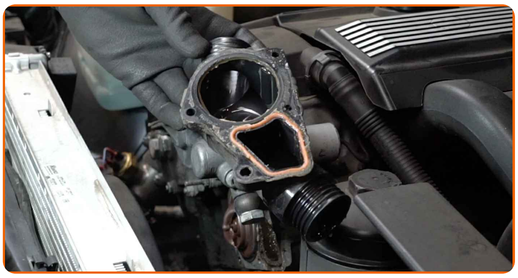
16 Clean the thermostat housing fasteners. Use all-purpose cleaning spray.



17 Unscrew the thermostat housing fasteners. Use a drive socket #10. Use a ratchet wrench.



18 Remove the thermostat housing.



AUTODOC recommends:

- Replacement: water pump – BMW 5 Touring (E39). To avoid damaging the part when removing it, do not use excessive force.
- Caution! Coolant may leak out of the coolant lines and thermostat housing.

19 Unscrew the water pump pulley fastener. Use a drive socket #10. Use a ratchet wrench.



20 Pull aside the V-ribbed belt tensioner pulley. Use a drive socket #16. Use a ratchet wrench.



21 Remove the V-ribbed belt.

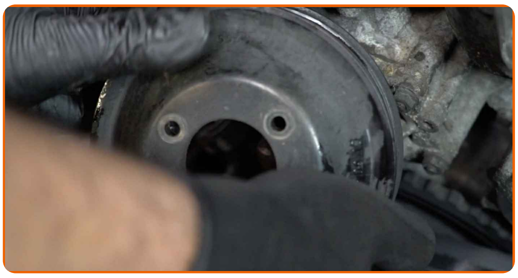


Replacement: water pump – BMW 5 Touring (E39). AUTODOC experts recommend:

- Check the condition of the tensioner pulley and idler pulley. Replace them if necessary.

22 Return the tensioner pulley to its initial position.

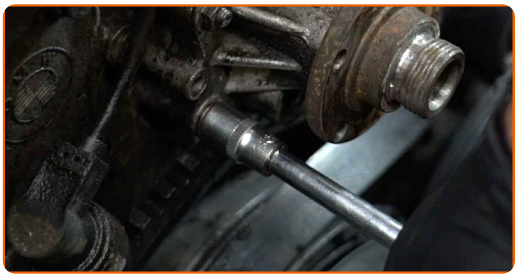
23 Remove the water pump pulley.



24 Clean the water pump mounting seat. Use a wire brush. Use all-purpose cleaning spray.



25 Unscrew the water pump fasteners. Use a drive socket #10. Use a ratchet wrench.



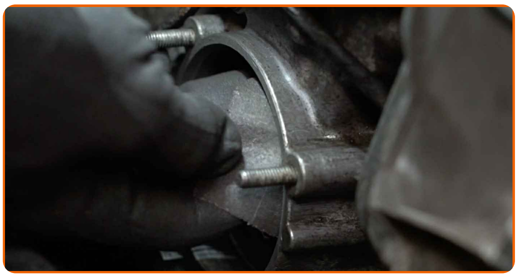
26 Remove the water pump.



Replacement: water pump – BMW 5 Touring (E39). Tip:

- Caution! Coolant may come out from the water pump channels and body.

27 Clean the water pump mounting seat. Use a seal scraper. Use all-purpose cleaning spray.



28 Treat the water pump mounting seat. Use a sealant.



29 Install the new water pump.



30 Tighten the water pump fasteners. Use a drive socket #10. Use a torque wrench. Tighten it to 9 nm torque.



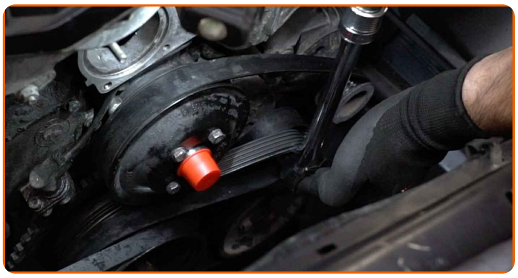
31 Install the water pump pulley.



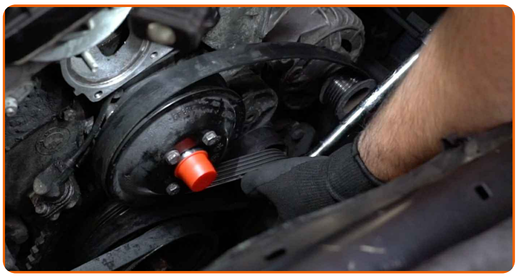
32 Screw in the fasteners of the water pump pulley. Use a drive socket #10. Use a ratchet wrench.



33 Pull aside the V-ribbed belt tensioner pulley. Use a drive socket #16. Use a ratchet wrench.



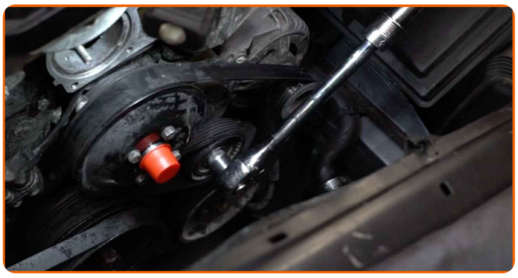
34 Install the V-ribbed belt.



Replacement: water pump – BMW 5 Touring (E39). AUTODOC recommends:

- Make sure that the V-ribbed belt fits all pulleys snugly.

35 Return the tensioner pulley to its initial position. Use a drive socket #16. Use a ratchet wrench.



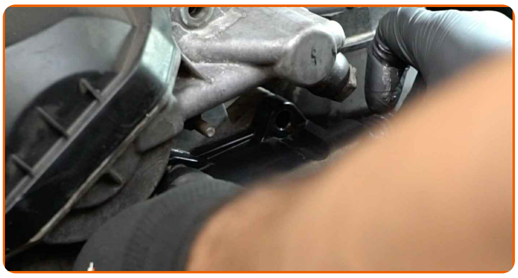
36 Tighten the water pump pulley fastener. Use a drive socket #10. Use a torque wrench. Tighten it to 17 nm torque.



37 Treat the thermostat housing mounting seat. Use a sealant.



38 Install the thermostat housing.



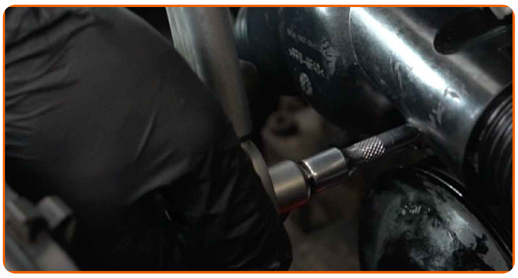
AUTODOC recommends:

- Replacement: water pump – BMW 5 Touring (E39). To avoid damaging the part during installation, do not use excessive force.

39 Attach the coolant pipe bracket. Use a drive socket #13. Use a torque wrench. Tighten it to 11 nm torque.



40 Tighten the thermostat housing fasteners. Use a drive socket #10. Use a torque wrench. Tighten it to 7 nm torque.



41 Clean the thermostat housing fasteners. Use all-purpose cleaning spray.



42

Connect the coolant hoses to the thermostat housing.



43

Fasten the clamps of the coolant hoses. Use a drive socket #7. Use a ratchet wrench.



44

Remove the coolant reservoir cap.



45

Insert the funnel.



46

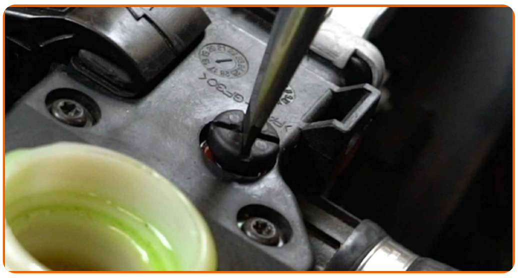
Pour coolant in the coolant reservoir.



Replacement: water pump – BMW 5 Touring (E39). AUTODOC experts recommend:

- Only use the coolant recommended by the manufacturer.
- The coolant level should be at the MAX mark.
- Wait until the air goes out of the system.

47 Open the coolant system bleed screw. Use a flat screwdriver.



Replacement: water pump – BMW 5 Touring (E39). Tip from AUTODOC experts:

- This should be done in order to remove residual air from the cooling system and to check if the components are operating correctly.

48 Check the coolant level. If necessary, top up to the required level.



49 Install the coolant reservoir cap.



50 Screw on the coolant reservoir cap.



51 Run the engine for a few minutes. This should be done in order to remove residual air from the cooling system and to check if the components are operating correctly.

52 Close the coolant system bleed screw. Use a flat screwdriver.



53 Shut off the engine.

54 Reinstall the air distribution housing assembly.

55 Install the air duct housing fasteners.

56 Remove the fender protection cover.

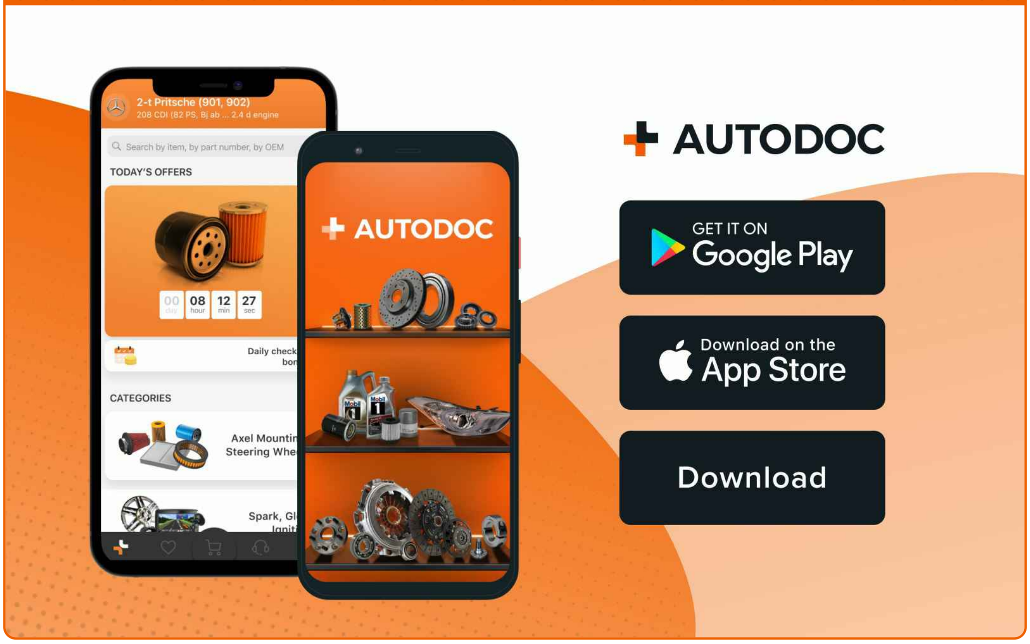
57 Close the hood.

WELL DONE!

VIEW MORE TUTORIALS

AUTODOC — TOP QUALITY AND AFFORDABLE CAR PARTS ONLINE

AUTODOC MOBILE APP: GREAT DEALS AND CONVENIENT SHOPPING



A GREAT SELECTION OF SPARE PARTS FOR YOUR CAR

WATER PUMP: A WIDE SELECTION

ⓘ DISCLAIMER:

The document contains only general recommendations that may be useful for you when you perform repair or replacement work. AUTODOC shall not be liable for any loss, injury, damage of property occurring in the repair or replacement process due to incorrect use or misinterpretation of the provided information.

AUTODOC shall not be liable for any possible mistakes and uncertainties in this guide. The information provided is for information purposes only and cannot replace advice from specialists.

AUTODOC shall not be liable for incorrect or hazardous usage of equipment, tools and car parts. AUTODOC strongly recommends to be careful and observe the safety rules when performing repair or replacement works. Remember: usage of low quality auto parts does not guarantee you the appropriate level of road safety.